LETTER TO THE EDITOR

Systematic Review of Pharmacogenetic Warfarin Dosing

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To the Editor: —In the article[1] by Neudoerffer et al. the safety and efficacy of genotype-guided dosing of warfarin was described. The conclusion was that there is not sufficient evidence to support the use of pharmacogenetics to guide warfarin dosing and that additional clinical trials are necessary. An overview of these additional and ongoing clinical trials was given in Table 5. At least five ongoing clinical trials were identified, to which we would like to add a sixth randomized trial. Details of this study design are expected to be published soon.

The EUropean Pharmacogenetics of AntiCoagulation Therapy (EU-PACT) trial will investigate the added value of pretreatment genotyping for anticoagulation therapy with warfarin, acenocoumarol and phenprocoumon. In February 2010 the inclusion of 985 patients using a coumarin derivate in the EU-PACT trial will start. EU-PACT is funded by the European Community's Seventh Framework Programme (grant agreement number HEALTH-F2–2009–223062). The trial will be performed at 13 centers in seven European countries, which makes extrapolation of the results to other (European) countries feasible. The primary outcome measure is percentage time of the INR within the therapeutic range. Secondary outcomes are, among others, major hemorrhage, the cost-effectiveness of pretreatment genotyping, and the clinical utility of the rapid genotyping instrument that we will implement.

The EU-PACT trial will evaluate the cost-effectiveness of genotype-guided dosing of three different coumarin derivatives. Furthermore, we will investigate the utility of a rapid genotyping instrument, which makes it possible to prescribe a personalized dose to the patient including his genetic information from day one.

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REFERENCE

1. **Neudoerffer Kangelaris K, Bent S, Nussbaum RL, Garcia DA, Tice JA.** Genetic testing before anticoagulation? A systematic review of pharmacogenetic dosing of warfarin. J Gen Intern Med. 2009;24:656–64.

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